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The Structure Of Household Income And Expenditure In Waemasin Village And Alfafa Hamlet, Waisama Subdistrict, South Buru

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Abstract

This study aims to analyze and compare the household income and expenditure structures in Waemasin Village and Alfafa Hamlet, Waesama Subdistrict, South Buru Regency. The research is motivated by the shift in consumption patterns from local foods, such as sago and cassava, to rice, which increases household economic burdens and affects food security in island communities. A descriptive quantitative approach was employed using primary data collected through structured interviews, questionnaires, and field observations, as well as secondary data from Statistics Indonesia, village monographs, and relevant literature. The sample consisted of 60 households, comprising 30 households in Waemasin Village and 30 households in Alfafa Hamlet, selected through quota sampling and simple random sampling. The data were analyzed using descriptive statistics, including the mean, standard deviation, minimum and maximum values, and the proportions of food and non-food expenditures. The results show that the average household income in Alfafa Hamlet is higher than in Waemasin Village, although both areas experience substantial income inequality. Waemasin Village exhibits a nominal economic deficit because total expenditure exceeds income; however, household livelihoods are sustained through non-cash consumption of locally produced food, which serves as an essential economic buffer. In contrast, Alfafa Hamlet shows an economic surplus, but households rely more heavily

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on cash-based market food purchases and have a relatively low proportion of local food consumption. These findings emphasize that strengthening local food systems is crucial to reducing household economic vulnerability, particularly in island regions facing income volatility and rising food prices.

Keywords: income structure; expenditure structure; local food; food security; rural household

INTRODUCTION

Food security has emerged as a critical issue at both the global and national levels, driven by climate change and price volatility, thereby necessitating a comprehensive evaluation of Indonesia's food systems. The high societal dependency on rice has rendered the national food system highly vulnerable, notwithstanding the abundance of local food potential. Approximately 98 percent of the Indonesian population relies on rice as their staple food (Riyadi, 2002). Malian *et al.* (2004) posit that this trend of dependency has effectively displaced the consumption of traditional, corn- and sago-based foods across various regions. In archipelagic areas such as South Buru Regency, Maluku, local commodities, namely sago and cassava, have historically served as the primary pillars of food security. Currently, however, a massive transition in consumption patterns is underway, shifting away from local foods toward rice. This transition is catalyzed by a myriad of complex factors, including land-use conversion, shifting dietary preferences among the younger generation, and the legacy impacts of past policy interventions such as the *Raskin* (Rice for the Poor) program. Ultimately, this dietary shift not only precipitates degenerative health issues, such as diabetes, but also significantly exacerbates the economic burden on households.

The economic and ecological ramifications of this dietary transition have been highlighted in several prior studies. Research conducted by Latue *et al.* (2021) and Baransano *et al.* (2019) confirms that the shift toward rice precipitates a surge in household livelihood costs and a drastic decline in local food production within Eastern Indonesia. Nevertheless, these studies have yet to undertake a profound and comprehensive analysis regarding the structural composition of household expenditures. Furthermore, the extant literature tends to treat communities as homogenous entities, thereby neglecting the variations in socio-cultural adaptation strategies employed by communities in response to the pressures of food modernization. Consequently, a prominent knowledge gap persists concerning how geographically proximate communities,

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despite possessing divergent food bases and economic orientations, strategize their household expenditure allocations amidst this dietary transition.

To bridge this gap, the present study focuses on two locales with distinct socio-ecological characteristics: Waemasin Village and Alfafa Hamlet. Waemasin Village represents a cassava-based, subsistence food security system that is deeply integrated with Butonese ethnic traditions, thereby fostering stable food independence. Conversely, Alfafa Hamlet embodies a more complex, semi-commercial, sago-based food system that is currently experiencing severe pressure stemming from cultural erosion.

Therefore, this research aims to conduct a comparative analysis of the household income and expenditure structures across these two regions. The findings of this study are anticipated to provide novel insights into the specific roles of localized food systems in bolstering household economic resilience, while concurrently serving as an empirical foundation for food diversification policies in archipelagic regions.

LITERATURE REVIEW

Concepts of Rural Household Income and Expenditure Structures

Within the economic analysis of rural households, income and expenditure constitute two primary, interrelated indicators that determine family welfare and food security levels. Household income encompasses all aggregate receipts, whether in the form of cash or in-kind/subsistence goods, derived from on-farm, off-farm, and non-farm economic activities (Ellis, 2000; Nicholson and Snyder, 2012). In rural contexts such as Waemasin Village and Alfafa Hamlet, income structures are frequently multi-sourced and highly volatile, as they are largely contingent upon seasonal variations, access to natural resources, and local employment opportunities.

The accrued income is subsequently allocated to fulfill household needs via an expenditure structure, which is broadly categorized into food and non-food expenditures (Deaton and Muellbauer, 1980). According to Engel's Law, the proportion of expenditure allocated to food is inversely related to income levels; as household income increases, the percentage of expenditure devoted to food tends to decline, shifting correspondingly toward non-food necessities (Nicholson, 2002). Consequently, the magnitude of food expenditure proportions serves as a critical proxy for assessing the economic vulnerability of households in Waemasin Village and Alfafa Hamlet to price shocks and short-term income deficits.

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Food Security and the Position of Local Food within the Household Economic Framework

Food security is a dynamic condition that transcends mere physical availability, encompassing four principal dimensions: availability, economic and physical access, utilization, and stability (FAO, 2023). Within the national legal landscape, Law No. 18 of 2012 mandates the fulfillment of food needs based on local resource potential to realize food sovereignty. Local food is defined as foodstuff produced, processed, and consumed in alignment with natural resource potentials, ecological adaptations, and local cultural practices (FAO, 2010).

Within the framework of household expenditure structures in Waemasin Village and Alfafa Hamlet, local food commodities (such as sago and cassava) serve a strategic function as an economic buffer. The availability of local foods mitigates household reliance on cash expenditures for external market commodities, notably rice (Pingali, 2007; Suryana, 2014; Ariani, 2010). Consumption diversification rooted in localized potential acts as a crucial instrument in anticipating income volatility and market food price surges (Rachman and Ariani, 2008).

Comparative Value of Local versus Non-Local Food Consumption

The structure of household expenditure allocation is heavily influenced by food acquisition sources, encompassing both self-production (subsistence) and cash-based market purchases. In rural areas, local foods are frequently procured through independent production systems, the utilization of home gardens or forests, and barter-based social institutions, thereby effectively curbing cash expenditure allocations (Maxwell and Frankenberger, 1992; Saliem *et al*. 2001). The utilization of local commodities, such as cassava processed into traditional foods (e.g., *kasuami*), alongside the communal management of sago crops, not only ensures daily carbohydrate and nutritional intake but also bolsters social capital and community economic self-reliance (Howeler, 2021; Riry, 2022).

Conversely, the proportion of expenditure allocated to non-local foods (such as market rice, instant noodles, and wheat-based products) necessitates cash liquidity derived from household income. Excessive dependence on non-local food markets risks exacerbating household microeconomic vulnerability, particularly amidst daily income fluctuations or national spikes in food commodity prices (Widowati and Nurfitriani, 2023).

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The Dynamics of Consumption Transition and Shifts in Expenditure Profiles

Although the utilization of local foods offers expenditure efficiency and enhanced food security stability, the consumption allocation structures among contemporary rural households are undergoing a significant shift. This phenomenon aligns with the nutrition transition theory, which posits a dietary shift from high-fiber traditional foods toward modern processed alternatives perceived as more convenient (Popkin, 2006; Popkin, 2022).

Perspectives from economic anthropology indicate that food functions not only biologically but also carries symbolic value, social status, and cultural identity (Mintz and Du Bois, 2002). As a consequence of modernization and policy interventions, non-local foods (such as rice) are frequently perceived as conferring a higher social status than traditional local foods (Sabaggalet, 2023). Although rural communities possess cognitive awareness regarding the nutritional value and availability of local foods (Abidin and Musadar, 2018), ultimate consumption decisions are frequently distorted by factors of convenience, the accessibility of food assistance programs, and the lifestyle dynamics of the younger generation (Purnomohadi *et al*., 2012; Azis *et al*., 2012; Muttagin *et al*., 2022). Ultimately, this shift in preferences transforms household expenditure profiles, rendering them increasingly consumptive and profoundly reliant on cash income.

RESEARCH METHOD

This study employs a descriptive quantitative approach. This methodological framework was selected to statistically analyze and delineate the magnitude of income and the allocation of expenditures across both research sites. The data utilized are quantitative in nature, comprising nominal figures of monthly income derived from various sectors, alongside detailed breakdowns of food and non-food expenditures. The data sources for this study are twofold: primary and secondary data. Primary data were acquired directly through structured interviews, questionnaire administration, and field observations. Conversely, secondary data were procured from publications by Statistics Indonesia (BPS), the demographic monographs of Waemasin Village and Alfafa Hamlet, as well as supplementary literature, including relevant scientific journals and printed texts.

The target population for this study encompasses all households in Waemasin Village and Alfafa Hamlet, located within the Waesama District of South Buru Regency. The selected respondents comprised household heads or homemakers possessing definitive knowledge of the

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family's income, expenditures, and food consumption patterns. The sample size was established at 60 households, distributed equally between 30 households in Waemasin Village and 30 households in Alfafa Hamlet. This sample size was determined utilizing quota sampling, a technique that establishes a predefined quota of respondents to be fulfilled within each respective research locale (Sugiyono, 2023). This method was selected to ensure that the comparative analysis of household income and expenditure structures between the two locations could be executed in a balanced, proportional, and objective manner. Once the quota for each region was established, the ultimate selection of respondent units was conducted via simple random sampling. This ensured that every eligible household had an equal probability of inclusion until the quota of 30 respondents per region was satisfied (Sugiyono, 2023).

The primary instrument utilized in this study was a structured questionnaire, comprising both closed-ended and open-ended inquiries. This questionnaire was meticulously designed to document detailed monthly household income, alongside the frequency and volume of daily, weekly, and monthly consumption. Data collection was executed through a multi-stage process involving field observations, in-depth interviews, questionnaire administration, and documentation.

The amassed data were subsequently subjected to quantitative descriptive analysis. This analytical phase involved computing and characterizing household income and expenditure structures using descriptive statistical parameters, namely the mean, standard deviation, minimum, and maximum values. These parameters were systematically applied to variables including total household income, aggregate expenditures, food expenditures, non-food expenditures, as well as the relative percentages (proportions) of each respective expenditure component.

RESULTS AND DISCUSSION

The Structure of Household Food and Non-Food Expenditures in Waemasin Village and Alfafa Hamlet

Household Income

Total household income represents the aggregate earnings derived from both the agricultural and non-agricultural sectors. In Waemasin Village, income originating from the agricultural sector (cassava, copra, vegetables, fish) was recorded at IDR 5,763,250, whereas the non-agricultural sector (wage labor, salaries, social assistance, services) yielded IDR 54,210,000.

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Meanwhile, in Alfafa Hamlet, agricultural income (sago, copra, vegetables, marine fish) reached IDR 8,898,750, and the non-agricultural sector (wage labor, civil service/honorary salaries, social safety nets [PKH/BLT], remittances, motorcycle taxi [*ojek*] services, commerce) generated IDR 52,807,000. A detailed breakdown of total monthly household income per location is presented in Table 1.

Table 1. Monthly Household Income

Statistical Category	Waemasin (n=30) (IDR/month)	Alfafa (n=30) (IDR/month)
Mean	2,085,017	2,371,292
Standard Deviation	2,305,407	2,527,316
Median	707,500	1,444,375
Minimum	166,500	85,000
Maximum	7,832,500	11,085,000

Source: Processed Primary Data (2026)

As delineated in Table 1, the mean household income in Alfafa Hamlet (IDR 2,371,292/month) is comparatively higher than that of Waemasin Village (IDR 2,085,017/month). However, a more pronounced disparity is evident in the median values, recorded at IDR 1,444,375 in Alfafa as opposed to IDR 707,500 in Waemasin. The substantial divergence between the mean and median, coupled with the elevated standard deviation (exceeding IDR 2 million), indicates severe income distribution inequality among the households. The exceptionally broad income range further corroborates this phenomenon, spanning from IDR 166,500 to IDR 7,832,500 in Waemasin, and from IDR 85,000 to IDR 11,085,000 in Alfafa. Given that the inflated mean is positively skewed by a marginal number of exceptionally high-income households (outliers), the median serves as a significantly more representative indicator of the economic realities faced by the majority of respondents.

This distributional inequality is predominantly driven by variations in access to income-generating sources, assets, and social networks within rural settings (Todaro and Smith, 2015), a structural phenomenon further validated by Statistics Indonesia (BPS, 2023). Specifically, the peak maximum income observed in Alfafa Hamlet is heavily catalyzed by substantial remittance inflows from family members residing outside the region. This finding aligns with the World Bank report (2020), which asserts that remittances play an indispensable role as an alternative income source in elevating household welfare and alleviating poverty within rural communities.

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Household Expenditures

Household expenditures are categorized into three primary components: cash-based market purchases for food (e.g., rice, instant noodles), non-cash consumption of locally sourced food derived from subsistence production (e.g., cassava, sago, fish, local vegetables), and non-food expenditures (e.g., education, healthcare, utilities). The mean values for these respective expenditure categories are presented in Table 2.

Table 2. Mean Monthly Household Expenditures (Rp)

Expenditure Component	Waemasin (Rp/month)	Alfafa (Rp/month)
Mean Market Expenditures (Cash-Based Food)	563,970	913,600
Mean Local Food Consumption (Non-Cash)	1,749,500	232,500
Mean Total Food Expenditures	2,313,470	1,146,100
Mean Non-Food Expenditures	951,500	641,305
Mean Total Household Expenditures	3,264,970	1,787,405

Source: Processed Primary Data (2026)

As detailed in Table 2, the expenditure structures across the two locations exhibit pronounced disparities. The aggregate monthly expenditure in Waemasin (IDR 3,264,970) is substantially higher than that of Alfafa (IDR 1,787,405). This elevated figure in Waemasin is predominantly driven by the substantial valuation of non-cash local food consumption (IDR 1,749,500), which is imputed using prevailing market prices despite the absence of actual cash outlays by the respondents. Conversely, households in Alfafa Hamlet allocate a considerably larger proportion of their financial resources toward market purchases or cash-based food acquisitions (IDR 913,600) as opposed to local food consumption (IDR 232,500). Regarding non-food expenditures, Waemasin similarly registers a higher figure (IDR 951,500) relative to Alfafa (IDR 641,305).

A comparative analysis of income and expenditure unveils divergent economic adaptation strategies between the two locales. In Waemasin Village, the mean income (IDR 2,085,017) is eclipsed by total expenditures (IDR 3,264,970), signifying a nominal economic deficit. Nevertheless, the community sustains its livelihood through a subsistence economic system, wherein basic needs are met via independent self-provisioning. The utilization of such localized resources serves as a pivotal strategy for rural household food security (FAO, 2008).

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In contrast, Alfafa Hamlet demonstrates a structural surplus, with its mean income (IDR 2,371,292) surpassing total expenditures (IDR 1,787,405). Despite possessing superior economic liquidity, their substantial cash outlays for food indicate a profound dependency on the market rather than on self-production, a phenomenon frequently associated with shifting consumer preferences commensurate with income augmentation (BPS, 2023).

These empirical findings bear direct implications for the economic access pillar within the broader food security framework (FAO, 2023). Households in Waemasin confront severely constrained cash-based economic access (Sen, 1981); consequently, non-cash (subsistence) food provisioning acts as their primary mitigative mechanism. Conversely, households in Alfafa enjoy comparatively enhanced economic access, albeit remaining categorized as vulnerable to food insecurity, relying predominantly on market purchasing power as the foundational pillar of their food security.

Conclusion

Derived from the aforementioned results and discussion, it can be concluded that although Alfafa Hamlet records higher mean and median income levels than Waemasin Village, both regions concurrently experience severe disparities in income distribution. From an expenditure perspective, the two locales exhibit starkly contrasting economic adaptation strategies. Waemasin Village demonstrates a nominal economic deficit, wherein expenditures exceed income. Nevertheless, household viability is sustained through a subsistence economic framework. Constraints on cash-based economic access are mitigated by a substantial reliance on non-cash local food consumption, sourced from independent production and natural resources, which functions as a crucial economic buffer for the families. Conversely, Alfafa Hamlet exhibits an economic surplus, with income surpassing expenditures, partially driven by external factors such as remittances. However, its expenditure structure reveals a profound dependency on the market (via cash-based food purchases), while the proportionate role of local food consumption remains significantly diminished. Overall, the economic access pillar of food security in Waemasin Village is underpinned by the utilization of localized, non-cash food resources, whereas Alfafa Hamlet is acutely reliant on market purchasing power. This dichotomy reinforces the premise that the optimization of local food systems constitutes a pivotal instrument for rural households to withstand economic vulnerability and income volatility.

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